PART IV

THE MEDITERRANEAN WORLD

but now Odysseus

came to the famous house of Alkinoös, but the heart pondered

much in him as he stood before coming to the bronze threshold.

For as from the sun the light goes or from the moon, such was

the glory on the high-roofed house of great-hearted Alkinoös.

Brazen were the walls run about it in either direction

from the inner room to the door, with a cobalt frieze encircling,

and golden were the doors that guarded the close of the palace,

and silver were the pillars set in the brazen threshold.…

And within, thrones were backed against the walls on both sides

all the way from the inner room to the door, with fine-spun delicate cloths,

the work of women, spread out upon them.

—Lattimore, 1967, Odyssey, Book VI, 81.

CHAPTER 9

The First Aegean Civilizations

The crowd looked on expectantly as the bull pawed the ground, then lowered its head and

charged the young man directly in its path. For him this was no suicide mission but the culmination of months of training. As the bull drew near, the athlete deftly seized it by the horns and vaulted onto its back. The bull, puzzled and frustrated, came to a sudden halt, and the athlete with one bound leaped clear, landed on his feet, and threw his arms out wide in a dramatic flourish. His hazardous feat was completed, and the crowd of onlookers—ruling elite, priests, palace officials, and ordinary townspeople—broke into applause. Behind them rose the multiple tiers of the palace of Knossos, an impressive backdrop to this scene of ritual and athletic action. The bull had once again been overcome and outwitted by human ingenuity and skill.

Chapter Outline

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After the Palaces: Postpalatial Greece (1200–1050 B.C.)

The bull-leaping ritual described on page 242 is depicted in the frescoes of the Minoan palace at Knossos, Crete. Young men and women alike took part in this perilous ritual, or so it seems—for some have doubted whether it is really possible to grasp the horns of a charging bull and leap over its back, suggesting that in real life the athletes approached the bull from the side. One carved stone vessel shows a young man transfixed by the horns of a bull, suggesting that some such dangerous acrobatic act was indeed part of Minoan palace ritual. But was it a real-life event that was being depicted, or some legendary feat? Some archaeologists have even argued that the bull-leaping frescoes represent the movement of constellations in the night sky, though the constellations themselves—and the names by which we know them—can only be traced back with confidence to the last few centuries B.C., fully a thousand years after the Knossos frescoes were painted.

The meaning of the ritual—whether an initiation rite for young men and women or an annual reenactment of some mythological event—still escapes us, but the bull-leaping frescoes from Knossos have become a well-known feature of the Minoan civilization, which developed on Crete around 2100 B.C. It takes its name from Minos, the legendary king who ruled the seas with a powerful fleet and kept a bull-headed monster, the Minotaur, in his labyrinth at Knossos. This beast was annually fed seven youths and seven maidens, until it was slain by the Athenian hero

Theseus. It used to be thought that there were memories in this legend of a real historical event—the takeover of Minoan Crete by the Mycenaeans from mainland Greece—for around 1450 B.C. the Minoan palaces were destroyed. Only Knossos was rebuilt, and the earlier situation of multiple centers was replaced by a period in which Knossos was the sole center of power on the island. Furthermore, the Linear B texts found at Knossos show that when the palace rose again from the ashes, it was Greek from the mainland rather than the indigenous Minoan language that was being used by the palace scribes. Other recent evidence, however, challenges the idea of a direct Mycenaean take-over.

Chapter 9 describes both the Minoans and the Mycenaeans (see Table 9.1 on page 245). They were the twin foci of an Aegean Bronze Age world that also included the island societies of the Cyclades. In chronological terms, Minoan civilization came first, its influence spreading widely through the Cycladic islands during the second millennium B.C. On the mainland, the separate, palace-based civilization of the Greek-speaking Mycenaeans arose during the sixteenth century B.C. (the period of the famous Shaft Graves, mentioned in Chapter 1). Mycenaean civilization in its formative stages owed a great deal to Minoan Crete. Mycenaean painted pottery, for example, was dependent in its development on Minoan styles, and Mycenaean luxury arts relied heavily on Minoan models. This is not to say that Mycenaean civilization was a mere copy of Minoan culture—that would be very far from the truth—but Minoan influence was clearly powerful. The positions were partially reversed, however, in the fifteenth century B.C., when the Mycenaeans took control of Crete. Thereafter the Aegean fell increasingly under Mycenaean influence, a situation that continued until the downfall of the mainland palaces around 1200 B.C. Crete and other regions retained their distinctive local identities, however, and did not simply become submerged in a broader Mycenaean world.

This chapter begins with developments on Crete, the Cycladic islands, and the southern Greek mainland during the Early Bronze Age (3200–2100 B.C.) (see Figure 9.1 on page 246).

THE AEGEAN EARLY BRONZE AGE (3200–2100 B.C.)

Early Minoan Crete

The island of Crete is long and mountainous, with peaks rising to 2,500 meters (8,000 feet). Within the rugged uplands lie sacred caves, one (Dikte) reputedly the birthplace of the classical god Zeus. To north and south of the mountain backbone, a handful of fertile plains stretch toward the coast and to the harbor towns on which, until air travel, the island depended for contact with the outside world. Crete indeed is relatively isolated within the southern Aegean. To the south, 320 kilometers (200 miles) of open water lie between it and the North African coast; to the north, the nearest of the Cycladic islands is some 80 kilometers (50 miles) distant. The Cretans were nonetheless great sailors, and from the third millennium B.C. onward there is evidence for sporadic, then regular, contact with Egypt and the Near East in the form of hippopotamus ivory and Egyptian stone vessels imported to Crete.

Table 9.1 Chronological Table of Aegean Civilization

The third millennium on Crete is known as the Early Minoan or Prepalatial period.[1] This cor-

[1] A confusing feature of Aegean Bronze Age chronology is the use of two separate systems of terminology. The first is based mainly on pottery styles and is divided simply into Early (3200–2100 B.C.), Middle (2100–1700 B.C., and Late (1700–1050 B.C.). The mainland sequences are labeled Helladic—thus Early Helladic (EH), Middle Helladic (MH), and Late Helladic (LH); those of the Cyclades are labeled Cycladic (EC, MC, LC); and those of Crete, Minoan (EM, MM, LM).

Alongside this system is an alternative periodization based on the Minoan palaces, beginning

responds to the centuries before the construction of the first of the palaces for which Crete subsequently became so famous. Already at the end of the previous Neolithic period the first metals had begun to be used, notably copper. A characteristic Early Minoan metal item was the dagger, with rivet holes at the heel of the blade for attachment to a haft or handle. Such daggers are significant in two respects: First, they were clearly too small to be effective as weapons of war and were probably as much for display as for use (though even today Cretans usually carry knives for cutting all manner of things); second, the material from which they were made—copper mixed with arsenic—not only required craftsmanship but also was not widely available on Crete and may have been imported (perhaps from Cycladic sources such as Kythnos) from an early date.

The use of copper thus implies access to imported materials and specialized skills. It reinforces other evidence that suggests the gradual development of a more hierarchical society on Crete in the Early Minoan period. The strongest evidence comes from the graves. On the Mesara plain in the south, circular stone-built *tholos* tombs with corbel-vaulted roofs were built to hold communal burials. These tombs were probably family burial vaults, used over a period of several generations for the interment of family members. The number and character of the offerings placed with the dead becomes increasingly varied from one tomb to another, suggesting that there were growing differences of wealth between family groups. We can also point to the develop-

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with the Prepalatial period (3200–2100 B.C.). This is followed by the First Palace, or Protopalatial, period (2100–1700 B.C.), corresponding to the first Cretan palaces to the period of their destruction by earthquake c. 1700 B.C. Then follows the Second Palace, or Neopalatial, period (1700–1450 B.C.), which ends with the destruction of the Cretan palaces and the beginnings of Mycenaean control at Knossos. The Third Palace period runs from 1450 B.C. to the fall of the mainland Mycenaean palaces in 1200 B.C. The final phase in this system is the Postpalatial period, from 1200–1050 B.C. If the Santorini eruption did occur in around 1625 B.C., as some are now proposing, the end of the Second Palace period will have to be put back to that date, making

ment of a small number of larger settlements on Crete during the Early Minoan period. Most important of these was Knossos, in the center of the fertile northern plain, which had already been a much larger than average settlement in the preceding Neolithic period. By the beginning of the Bronze Age it covered as much as 5 hectares (12 acres). Similar Early Minoan settlements may lie beneath the later palaces at Mallia and Phaistos. Whether these medium-sized settlements were really the centers of emerging small kingdoms is far from clear, given our only sketchy knowledge of the remains. Size alone cannot tell us about the function or internal divisions of these sites.

MAINLAND GREECE AND THE CYCLADIC ISLANDS

Better evidence for emerging social complexity comes from mainland Greece and the Cycladic islands. At Lerna in the Peloponnese, a substantial Early Helladic mud-brick building known as the House of the Tiles stood within an enclosure wall with projecting, circular "towers." Doorways and stairs were made of timber, and the roof, as the name suggests, was of terracotta tiles and blue schist slates. Modest in scale (though much bigger than other buildings on the site), measuring 25 by 12 meters (82 by 39 feet), this building may have been the seat of a local ruler who controlled one corner of the fertile Argive plain during the second quarter of the third millennium B.C. Numerous sealings come from the House of the Tiles. These were produced by impressing a carved seal bearing a complex geometric design into the soft clay placed over the openings of boxes or jars to secure their contents. They denote some measure of ownership or administrative control, but their very diversity (70 different seal patterns) makes it difficult to see

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the Third Palace period much longer than previously supposed.

them as evidence of anything approaching a centralized bureaucracy. They are more likely to have been simply personal signatures.

On the Cycladic islands, the pattern is similar—with signs of modest social complexity in the form of longboats and fortifications. Here again, however, it would not do to overinterpret the evidence. The clearest fortifications are those of Kastri on Syros with its circular stone towers and a maze of small buildings within the walls. This nucleated settlement is associated with the cemetery of Chalandriani, which has more than 650 graves. Most Early Bronze Age cemeteries of the Cyclades have dozens rather than hundreds of graves, representing the burials of a nuclear family rather than a sizeable community, so Chalandriani is evidently exceptional. Its special status is underlined by the discovery of pottery objects known from their shape (but not their function) as "frying pans." These have richly incised decorations, including depictions of many-oared longboats, indicating perhaps the crucial role of sea traffic (possibly also piracy) in the prosperity of Syros. At least seven of the thirteen known frying pans come from Chalandriani, and the other six may also be from this cemetery.

Another striking feature of the Cycladic islands during the Early Bronze Age is the use of marble for vases and figurines. The figurines are especially distinctive in their repertoire of styles and have attracted the attention of art historians as well as archaeologists (Figure 9.2). Some, such as Patricia Getz-Preziosi, have gone so far as to suggest they can identify the work of particular sculptors. She has even assigned names to the supposed sculptors (based on museums where examples of their output are displayed), such as the "Berlin Master" or the "Goulandris Master." This places the figurines on the same footing as later artworks like classical vases or Renaissance paintings. It is much more likely that these relatively simple Cycladic figurines were

the work of small-scale local craftspeople. Many people today have admired the purity of line of these white marble carvings, which has given them inflated values in the international art markets and encouraged the large-scale looting of the island graves in which they were deposited. The purity of appearance is in any case largely deceptive: Traces of paint show that the figurines were originally brightly colored, probably in a garish style that highlighted facial features and clothing.B.C.)

Toward the First Palaces

On Crete itself, most Early Bronze Age settlements were small villages of around half a dozen households. A famous example is Myrtos, on the south coast. Myrtos was initially interpreted as a special site, a "mansion," with coordinated functions that indicate a move toward a palace-type economy. Reanalysis, however, has suggested that it was not a protopalace but simply a cluster of ordinary houses built against each other. At Knossos, Phaistos and Malia, however, it is clear that the open central courts were already in existence during the Early Bronze Age, and at Knossos indeed the central and west courts may have been laid out before the end of the Neolithic. Hence the palace-based structure of Minoan Crete had deeply rooted origins.

There is also evidence of social change in the tombs during the Early Minoan period, especially in eastern Crete. At Mochlos, for example, a small number of more elaborate tombs contained gold diadems and other valuables, whereas the majority of tombs were simpler and more poorly furnished. These were family burial places, so they must have been particular families who were gaining special status in society. Some have argued that a ruling elite had already emerged in some parts of Crete several centuries before the beginning of the Middle Minoan period—the age of the first palaces. It is possible, however, that Minoan society never developed

into a consolidated centralized state (or group of states). The palaces may not have been royal residences, but ceremonial centers for competing local lineages.

MINOAN CIVILIZATION: THE PALACE PERIOD (2100–1450 B.C.)

Cretan palaces appear suddenly in the archaeological record, but as we have seen, the foundations for the new developments must have been laid over preceding centuries. It was only in the Middle Minoan period, however, from around 2100 B.C., that palace centers are evident at key points throughout the island, notably at Knossos and Mallia in the north and Phaistos in the south. These first palaces were joined in the Second Palace period by Zakro in the east, and other palace sites are suspected in the center and west of the island. Each was probably the administrative and political center of a small state or province, though as we have just observed the function of the palaces themselves—ritual complexes or royal residences—remains far from clear, and the term "palaces" should be used with caution.

In the 1970s, British archaeologist Colin Renfrew emphasized an interlinked series of factors to explain the rise of the Minoan palaces—intensification of agriculture, growth of foreign trade, and increased craft specialization (see Chapter 2). Renfrew's argument was that these factors interacted with one another in a positive manner, by the process of "positive feedback," to magnify and accelerate the scale of change (what he called the "multiplier effect"), resulting in the formation of palace-based states. Some parts of this model are now generally discounted. It implies, for instance, a steady evolution of complex society on Crete during the Early Minoan period—something that the available evidence does not support. Renfrew also ascribed an important role to vines and olives. These are not grown on the same land as cereals and therefore do not compete with them. Renfrew proposed that the introduction of domesticated vines and olives in the

Early Bronze Age allowed a substantial expansion in the amount of land under cultivation and helped to power the emergence of complex society. Some archaeologists and palaeobotanists have recently questioned this view, pointing out that available evidence for cultivated vines and olives does not show their presence much before the Late Bronze Age. It is difficult to date their introduction with confidence from the scanty preserved remains, however, and some element of agricultural change would have been essential to support the larger population of palace-period Crete. Furthermore, elaborate drinking vessels appear in Crete during the Early Bronze Age and may indicate that the Cretans were already drinking wine at that period. Ritualized drinking and feasting were an important feature of Minoan society during the Palace period, and these special vessels suggest that the practice may have its roots in the third millennium B.C. Communal eating and drinking may have been one of the mechanisms that led to the development of more formalized and hierarchical power structures. But there is no firm evidence of extensive agricultural expansion on Crete during the Early Bronze Age. Agricultural change, rather than the driving force of Cretan state formation, was probably just one of several associated factors, along with social and ideological developments.

The Minoan Palaces

The Cretan palaces—and Minoan civilization as a whole—have been known to archaeologists little more than a hundred years. The discovery is usually attributed to British archaeologist Sir Arthur Evans, who began digging at Knossos in 1900, although in fact a local Cretan enthusiast—appropriately named Minos Kalokairinos—had already uncovered parts of the palace some twenty years before. Evans dug systematically at Knossos from 1900 to 1905 and then intermittently for more than twenty-five years, revealing large areas of the palace complex. It was first

thought that this was another Mycenaean palace, similar to those excavated by Schliemann at Mycenae and Tiryns on the mainland, discussed later in this chapter. Within a few years, however, Evans had come to quite a different conclusion—that what he was dealing with was not Mycenaean but a new civilization, which he termed Minoan after Minos, the legendary king of Crete.

The palace revealed by Evans was indeed an impressive structure (see Figure 9.3 on page 251). Spread over several hectares on the sloping edge of the earlier tell, it consisted of ranges of rooms around a rectangular central court, with a second court to the west. The key to the overall layout was the central open court, the heart of the palace. This gave access to all the other areas, which were basically arranged in a radiating fashion around it. The plan is an unusual one—very different, for example, from the megaron palaces of Mycenaean Greece.

The ground floors of Minoan palaces were constructed of rubble, faced with ashlar and reinforced with timber tie-beams as a precaution against earthquakes, which are a feature of the region. Indeed the first Knossos palace was destroyed by just such an earthquake around 1700 B.C. Upper floors, too, were timber-reinforced, with doorways and architectural details made of stone or wood. Mud-bricks were also used in the palace at Mallia. At Knossos, during the Second Palace period (and possibly earlier), the appearance of the rooms was transformed by the extensive use of painted plaster to produce the frescoes for which the site is justly famous. Surprisingly, there is little evidence of similar decorations at any of the other major palaces, but traces certainly remain at several of the "villas" (smaller palatial sites) such as Tylissos, Amnisos, and Ayia Triada. And there are elaborate wall paintings, surely Minoan-inspired, at such island sites as Phylakopi on Melos and Akrotiri on Thera.

The wall paintings at Knossos included both geometric and naturalistic designs. The walls of the ceremonial rooms were often divided horizontally into three painted bands, with plain colors or patterns above and below, framing a central band of figured scenes. Those with human figures were mainly religious or ceremonial in character. These included the famous "bull-leaping" frescoes (see Figure 9.4 on page 252) or the long *Procession Fresco,* showing gifts being brought to a female figure. Other paintings were naturalistic in character—notably the well-known Dolphin scene (probably, in fact, a floor decoration) from the so-called "royal apartments" in the southeast corner of the palace.

The question of the royal apartments introduces one of the key problems in the analysis of the Minoan palaces: interpreting the function of the various rooms. Those of utilitarian character, such as the ground-floor rooms with rows of storage jars, are straightforward. They held materials like grain, beans, and olive oil, which probably came to the palace as tax or tribute or as the produce of palace-held farmlands. The extensive storage facilities show that the palace was designed to play a key role in the agricultural economy as consumer, producer of processed goods, storer of surpluses, and regulator of distribution.

On the west side of the main court was a series of rooms of ritual or ceremonial importance, including the famous Throne Room with its carved gypsum throne set against the center of one wall and flanked by frescoes of recumbent griffins. Here again Evans's interpretation may seem reasonable. We are on much less secure ground concerning his hypothesis about the function of the rooms in the southeast corner of the palace. Here, at the first-floor level, reached by what Evans called the Grand Staircase, were a series of rooms that he believed were used by the royal family who ruled at Knossos, notably the Queen's Megaron with adjoining bathroom; an adjacent

corridor led to a lavatory with a wooden-seated toilet that discharged directly into a drain with provision for flushing. The hypothesis that the palace at Knossos was built by a ruling family may not in itself be farfetched, but the attribution of these particular rooms to a queen, well-appointed though they were, is more a flight of fancy than an archaeological fact.

While the occupancy of the individual rooms remains open to debate, the important ritual dimension of the palace is beyond question. Studies of the Knossos throne room, for example, have shown that it was designed to incorporate special sunlight effects at different times of the calendar year. The throne room is preceded by an antechamber with four doorways. At dawn on the midwinter solstice, the rising sun shines through the southernmost of these doors to rest directly upon the throne in the room beyond. This theatrical effect may have been designed to enhance the drama of midwinter ceremonies carried out at the throne. At midsummer sunrise, by contrast, light shines through the northernmost of the antechamber doors and illuminates the lustral basin in the room behind the throne room. Here again, we may envisage rituals and ceremonies held at this specific time of year. Similar features are found at other Minoan palaces, and indicate a specific concern with solar events. The architecture and layout of the Minoan palaces hence suggests many of their features were designed to serve as the theatres for ceremonial displays or mythological re-enactments. Wall paintings may depict such events, including the famous (though controversial) bull-leaping frescoes. Centralisation of political control may have strengthened in the Neopalatial period (c.1680-1415 BC), though strikingly it should be noted that individual rulers are represented neither in life or death.</P>

The Political Geography of Minoan Crete

The government of Knossos raises the issue of the political geography of Minoan Crete. While some see Knossos as the centre of a pan-Cretan state at this period, others argue that 2nd millennium Crete may have been populated by competing factions distributed across the landscape, a structure in which palace-based public ceremonies played a crucial role. Alternatively, the palaces may have been monumental communal structures built by and promoting cohesion among a number of corporate groups.

The palace of Knossos that the visitor now sees is essentially a structure of the Second Palace (Late Minoan) period, though it follows earlier palaces of Middle Minoan date on the same site. Similar palaces of Middle or early Late Minoan date are known from other parts of the island, notably Mallia in the north, Zakro in the east, and Phaistos in the south. There may have been other such centers at Khania in the west and at Galatas inland. The existence of a number of contemporary palaces suggests that Crete was divided into a series of autonomous political units, each centered on a major palace.

The palaces of Minoan Crete provide an excellent case for the theory of "peer polity interaction." This approach argues that states (polities) that are in contact will influence one another's development as ruling elites seek to emulate and surpass their neighbors. The striking similarities among the different Cretan palaces and the artifacts found in them (even painted pottery styles) might well be explained by such a process of interaction.

In addition to the palaces, there were also substantial towns. At Knossos, the town covered an area of 75 hectares (185 acres) around the palace and must have been a populous settlement, although we do not know how densely built up it was. Not all Minoan towns were centered on major palaces. No palace has yet been discovered at Palaikastro in eastern Crete, the largest exca-

vated Minoan town. Gournia on the north coast, the best-preserved Minoan town, has regular blocks of houses ranged along cobbled streets with only a modest palace or governor's residence overlooking a public square. We may imagine that these towns, with their small palaces, were centers of local administration. Some idea of the houses' appearance can be gained not only from excavation of their ground plan but also from artistic depictions such as the "town mosaic" found at Knossos. This series of faience plaques shows two- or three-story structures strengthened by timber reinforcing beams with windows on the upper floors.

In addition to towns and palaces, the political geography of Minoan Crete incorporated a third category of site known as the "villa." Much smaller than the palaces but often incorporating palatial features (architectural refinements, luxury objects, and cult equipment), these, too, seem to have been centers of local administration. They appear only in the Second Palace period and were probably the residences of local lords or high-ranking officials, but they also had storerooms for agricultural produce. One of the best-preserved villas, at Vathypetro, south of Knossos, was equipped with presses for wine and olive oil, underlining its role in the local economy. In addition to agriculture, however, some of these sites also show considerable evidence for ritual activities. Nirou Khani, for example, with bronze double axes and altar, may have been an important rural religious center.

Minoan Writing and Crafts

The Minoans used three major scripts, usually inscribed on clay tablets. Only the most developed of the three (Linear B) has been deciphered. The earliest script, commonly called hieroglyphic, came into use around 2000 B.C., near the beginning of the Palace period. It remained in use during the First Palace period. The script known as Linear A, developed during the eighteenth centu-

ry B.C., became the standard Cretan script of the Second Palace period and is also found on a number of Cycladic islands, including Melos and Santorini, and at Miletos on the west coast of Turkey. Examples have also been found as far afield as Tell Hazor and Lachish in Israel. Linear A was inscribed on clay tablets, clay labels, stone offering tables, and jewelry. Although the script cannot yet be read and we do not even know what language it represents, the patterns of signs on the tablets suggest that they are generally lists of commodities—in some cases, taxes or inventories of stores; in others, records of offerings due to the gods. Linear A tablets are relatively rare finds but show that the palaces in Crete were run by a literate bureaucracy of scribes or clerks. The short texts on jewelry and offering tables suggest that Linear A was also used in ritual contexts.

The third Cretan script is known as Linear B. It originated from Linear A but was adapted to the needs of the early form of Greek spoken by the Mycenaeans. It was used at Knossos (and on the Greek mainland) during the Third Palace period.

We have already seen in the construction of the Cretan palaces and the sophistication of the colorful frescoes the evidence of Minoan craft skill. Some of the finest examples are smaller objects such as pottery, gemstones, and figurines. The Minoans were consummate potters, producing high-quality thin-walled vessels and painting them with imaginative polychrome decorations. Stylized scenes of plants and marine life are among their most famous products. Some of the most elaborately decorated pottery was no doubt produced in the palace workshops and intended for the elite. Changing styles of painted pottery form the backbone of traditional Minoan chronology, though it is sometimes uncertain how far the styles are truly successive (rather than contemporary or overlapping), and it is very difficult to assign absolute dates or durations to the var-

ious phases on this basis alone. But the painted pottery serves above all to divide the Cretan Palace period into its traditional phases.[2]

Painted pottery, of course, represents only the finest wares, but even utilitarian vessels were skillfully made. At the other end of the scale, Minoan craftspeople also made vessels of gold and silver or carved from attractive stones like serpentine and banded marble. They produced finely carved gemstones and ivories, too, and knowledge of faience working is shown by the snake-goddess figurines from Knossos (see Figure 9.5 on page 255).

Minoan Religion

Our knowledge of Minoan religion comes from ritual equipment (including figurines) and other artistic depictions on frescoes and sealstones and from the remains of Minoan shrines. Archaeologists have identified two contrasting types of Minoan shrine. The first are those in the palaces and villas, stone rooms or buildings with benches and basins for offerings. Figurines of deities such as those from Knossos may well have been displayed in these shrines.

The second type of Minoan shrine is in a natural setting, on a hilltop or (more rarely) in a cave. Some 25 hilltop, or "peak," sanctuaries are known, most of them dating to the First Palace period (c. 2100–1700 B.C.). Two of the most elaborate, Jouktas and Petsophas, were associated with the nearby centers of Knossos and Palaikastro, respectively, and may in a sense have been "state" shrines. More numerous were the simpler peak sanctuaries, such as that recently excavated by British archaeologists Alan Peatfield and Christine Morris at Atsipadhes in western Crete.

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[2] The conventional classification scheme, based on vessel forms and decoration, is as follows: Middle Minoan IA, IB, IIA, IIB, IIIA, IIIB; Late Minoan IA, IB, II, IIIA1, IIIA2, IIIB, IIIC.

Here there was no evidence for any building; the nearest thing to a structure was an area of pebbles, brought to the site from the valley floor below, in the middle of which an upright stone or similar sacred object had once stood. The most striking and abundant finds from Atsipadhes, however, are some 5,000 figurine fragments. These are mainly of cattle (especially horns and legs), but there are also human figurines, including both whole figures and votive limbs. The site itself, like other peak sanctuaries, is relatively difficult of access and distant from lowland settlements. It may have been visited only during special festivals, when local people walked to the shrine, made offerings there, and left votive figurines to remind the deity of their particular needs, whether these related to their animals or to their own bodily health.

9.1 SITES *Dating a Bronze Age Catastrophe*

Akrotiri, on the Cycladic island of Santorini (Thera), has been labeled the "Pompeii of the Aegean." Early in the Late Bronze Age, this small town was buried in a volcanic eruption beneath several meters of ash and pumice. So quickly did the volcanic deposits accumulate that they have preserved the remains of houses still standing to a height of two or three stories, complete in many cases with colorful frescoes of scenes from ritual and daily life (Figure 9.6). Quite when this catastrophe occurred is the subject of heated and continuing debate. The pottery from the latest occupation at Akrotiri is of Late Minoan (LM) IA type. This has usually been dated to the mid 16th century B.C. on the basis of finds of LM IA material in dated Egyptian contexts. Scientific techniques, however, have been argued to give a much earlier date for the Santorini eruption. Large volcanic events emit enormous quantities of ash, which circulate in the upper atmosphere for many months, blocking the sun's rays and causing a nuclear winter effect over large areas of the northern or southern hemisphere. Hence the Santorini eruption should be visible in climatic

records such as peat bogs and tree rings. There was thus great excitement when teams of scientists discovered a period of markedly narrower tree rings in material from both California and Northern Ireland, beginning in 1628 B.C. These suggested that periods of cool weather lasted over several years, consistent with the effects of atmospheric dust. Others identified sulphur peaks in Greenland ice cores, dating to the mid-seventeenth century B.C. that were thought to be the result of sulphur emissions from a huge volcanic eruption. Using this and related evidence, a number of archaeologists proposed 1628 B.C. as the date of the Santorini eruption; they believed that the conventional chronology of the Aegean Late Bronze Age, based on links with Egypt, was simply wrong. This claim was subsequently thrown into doubt by studies of volcanic glass trapped in the Greenland ice core, which showed it to differ in composition from the Santorini material; hence the 1628 B.C. eruption might have been another volcano altogether. The recent discovery of a branch from an olive tree that was buried alive in the tephra from the Santorini eruption has, however, given renewed support for the earlier claim. The outermost tree ring of the olive branch can be dated precisely to the period 1627–1600 B.C. Hence the Santorini volcano may indeed have erupted in the late seventeenth century B.C. What impact this event may have had on Minoan Crete and the Aegean islands area remains uncertain. The dramatic scenarios proposed by earlier writers, who envisaged tidal waves sweeping down onto the Cretan coast and ash clouds covering the eastern end of the island in pumice, are now largely discounted. The Santorini caldera is thought to have collapsed gradually, in piecemeal fashion, after the eruption, and would not have created the huge waves once envisaged. Whether the effect of the Santorini eruption was sufficient to disrupt the Minoan economy and render the island vulnerable to Mycenaean invasion is still unresolved.

Peak sanctuaries such as Atsipadhes are essentially shrines for local people and are scattered

throughout the mountainous uplands of Crete. A significant change takes place during the Second Palace period (c. 1700–1450 B.C.), when most of the peak sanctuaries fell out of use. The six or eight that continued to flourish were all associated with palatial centers. Thus there appears to have been a suppression of local cults in favor of more centralized religious observance.

The objects of worship, gods or goddesses, are difficult to identify. One sealstone shows a goddess in flounced skirt standing on top of a mountain and flanked by dogs or felines. We have already mentioned the faience female figurines from Knossos, bare-breasted, with snakes on their arms or in their hands. A little later in date, the Linear B texts from Knossos mention offerings to the gods as well as "priestesses of the winds," and Minoan art shows scenes of animal (especially bull) sacrifices. The importance of religion in Minoan society is clear, as well as efforts by the state to harness it as a source of authority, but the details of cult and belief remain hazy.

CRETE AND ITS NEIGHBORS

The Minoans were able sailors and kept in close contact with surrounding lands. Most of their metal (copper, lead, and silver) came from the deposits at Laurion in Attica, on the Greek mainland. Ivory, gold, and other luxury materials may have been imported from the Near East. Cretan merchants were known in Egypt, as tomb paintings of people from an island named Keftiu confirm. A remarkable and much closer link with Egypt is shown by recent excavations at Avaris, a city site on the eastern edge of the Nile Delta. Here a rubbish deposit yielded fragments of a Minoan-style fresco, depicting a typically Cretan bull-leaping scene. Avaris was the capital of the pharaoh Amenhotep I as Ahmose during the seventeenth century B.C. (see Chapter 4). They may have had particularly close links with Crete. Fragments of similar wall paintings – again clearly of Minoan inspiration – have been found at Tel Kabri in Israel and Alalakh in southeast Turkey.

These may have been created by Minoan artisans living overseas, and could be part of a shared courtly culture of the 17th century B.C.they testify to the international connections that characterized the Aegean and East Mediterranean world at this period.

Minoan culture had enormous influence in the Aegean islands, especially the Cyclades immediately to the north. There has been great debate about whether the Minoans actually controlled the Cyclades, or some of them, during Middle and Late Minoan times. Minoan-style frescoes occur in the islands, notably at Phylakopi on Melos, Ayia Irini on Kea, and Akrotiri on Santorini (see Box 9.1 on pages 256–257). Fragments of Linear A tablets also come from Phylakopi and other Cycladic sites, even though it is unlikely that Cretans and Cycladic islanders spoke the same language. Later Greek legends tell of a Minoan "thalassocracy," a maritime empire based on a powerful Cretan navy, but whether this is based on historical reality and, if it is, whether that reality relates to the Minoan period are questions difficult to answer from archaeological evidence alone.

Crete's relations with the outside world took on an entirely different aspect early in the Late Bronze Age. The major palaces had already been severely damaged by an earthquake c. 1700 B.C., which marks the division between the First and Second Palace periods. A second destruction occurred at the end of the Second Palace period, when all the major palaces except Knossos were abandoned. The villas, too, were destroyed. When the dust settled a new administration was in place at Knossos, and the palace officials were using a new script, Linear B. This is now known to record an early form of Greek, the language used by Mycenaean rulers on the Greek mainland. It used to be believed that, early in the Late Bronze Age, Mycenaeans took control (either peacefully or by force) of the island of Crete, ousting the earlier Minoan rulers with their

non-Greek language. Recent analysis of strontium isotopes in so-called ‘warrior’ graves around Knossos that date to this period show that although the burial practices resemble those of the Greek mainland, the graves are those of local Cretan people. Hence rather than violent conquest, Crete may voluntarily have become part of the expanding Mycenaean world.

MYCENAEAN GREECE (1600–1050 B.C.)

The Mycenaeans take their name from Mycenae, the important citadel in the eastern Peloponnese, which was excavated by Schliemann in 1876–1877 (see Chapter 1). What he discovered in the Shaft Graves were the burials of the ruling elite who had governed Mycenae at the very beginning of the Late Bronze Age, in the early sixteenth century B.C. (see Figure 9.7 on page 259). The graves are among the earliest evidence of the change that the mainland experienced at this time, from the relatively unprepossessing Middle Helladic period to the Late Helladic, with fortresses, palaces, impressive tombs, and rich grave goods. These new features characterize the Mycenaean period (1600–1050 B.C.).<P>The Mycenaean centres of mainland Greece were heavily influenced by Cretan developments but arose from a very different social background. Early Minoan society, as we have seen, consisted of competing local lineages. In Mycenaean Greece, by contrast, the elaborate and richly furnished graves (including the Shaft Graves of Mycenae, and tholos tombs) indicate an emphasis on leadership and lineage. The Mycenaean palaces emerge from a background of dispersed settlement, a handful of large fortified sites, and tumulus burials. The Mycenaean ‘states’ (if such they were) represent the growing importance of hereditary leaders supported by the control of goods and surpluses and also – importantly – by warfare. Ritual and symbolism were adopted from Crete but played a less prominent role in creating and maintain the power of the ruling elites than they had in Minoan society. Mycenaean palaces

do not have the public ceremonial spaces we find in the Minoan palaces. It is interesting to observe, however, that not all regions of Mycenaean Greece were palace-centred, and other kinds of social and political organization must have existed. Palaces may not even have dominated even in 'palatial' regions, but could have been the fortified residences of leading lineages.

The landscape of mainland Greece makes it ideal for the development of autonomous, small-scale kingdoms. Mountains break the terrain into fertile coastal plains, each of which could naturally form the focus of a separate state. These kingdoms first became visible at the beginning of the Late Bronze Age, when the elites who governed them began to engage in long-distance trade with the hinterland of Europe and to proclaim their wealth and power through the richness of their grave goods. It was only in the later Mycenaean period, however, that writing was adopted for the administration of these kingdoms. Here, as in many other areas of life, the Mycenaeans owed a great debt to Minoan Crete. The Linear B script of Mycenaean Greece is indeed merely a version of Minoan Linear A adapted for the Mycenaean language.

The best-known sites of Mycenaean Greece are the major centers of Mycenae, Tiryns, and Pylos. Mycenae, as we have seen, was first excavated by Schliemann in 1876; significant work at Tiryns followed soon after in 1884. Both sites proved to be heavily fortified citadels built on rocky eminences. The enclosure or fortification of settlements on the Greek mainland goes back at least to the Early Bronze Age (third millennium B.C.), but the Mycenaean structures are on an altogether larger scale. Most impressive of all are the Cyclopean defensive walls of Mycenae, Tiryns, and Gla. The term *Cyclopean* refers to the use of large stone blocks carefully fitted together and takes its name from the legendary Cyclops, a race of giants. At Mycenae itself the Cyclopean enclosure is entered through a gateway of still more massive construction, with mono-

lithic jambs and lintel and a "heraldic" sculptured relief panel above the gate that depicts lions supporting a column (Figure 9.8). Such walls reflect a serious concern with defense and security. The military character is enhanced by the careful disposition of bastions and postern gates. Defenses were not always built entirely of stone, however; the wall of Mycenaean Thebes was largely constructed of mud-bricks, although it rested on a stone foundation. Furthermore, it seems that some centers lacked defenses of any great substance; none were found at Pylos, for example. This raises the possibility that the western Peloponnese, where Pylos is located, was more peaceful than other parts of Mycenaean Greece: the Argolid, Attica, or Boeotia.

Natural citadels such as Mycenae were probably fortified from the outset of the Late Bronze Age, as early as the sixteenth century B.C., but the first major fortifications in Cyclopean style, here and at other sites, are only dated to the fourteenth century B.C. The first Mycenaean palaces date to the same period. Early in the thirteenth century, the needs of defense seem to have escalated. The walled area was enlarged at both Mycenae and Tiryns. At Mycenae, a new length of walling was built to enclose the southern slopes of the citadel. Grave Circle A, with the famous Shaft Graves, was thus brought within the fortified perimeter, though it was probably the need for a strategic defensive line rather than the desire to protect the graves themselves that was responsible. The more recent *tholos* tombs still lay outside the walls. At Tiryns, the fortifications were both extended and elaborated—extended to take in the lower citadel on the northern part of the ridge, and elaborated with the construction of massive new bastions provided with rows of arrow loops for a more active kind of defense (see Figure 9.9a on page 261 and Figure 9.9b above).

Mycenaean fortifications varied considerably in the extent of the area they enclosed. The

largest, Gla, had walls almost 3.2 kilometers (2 miles) long, though this unusual site was perhaps a special military installation. At Thebes, too, it seems that the defensive wall encircled the whole of the site, but in other cases the fortified area appears to have been a citadel, with a lower town at its foot. Such was the case at Mycenae, where groups of houses were scattered among tombs on the slopes below the citadel. Some of the houses were richly appointed, with painted frescoes, but the settlements as a whole were not extensive and should be described as towns rather than cities.

Palace-Based polities

The focus of the Mycenaean palace was an architectural complex known as a *megaron.* This consisted of a principal room with a central, raised hearth that was entered through an antechamber by a single door from a columned porch on the long axis: Porch, antechamber, and main room formed three elements of a single plan. Along the outside of the longer walls of this complex ran corridors giving access to adjacent suites. The main room with hearth was clearly a ceremonial chamber. The best-preserved example is at Pylos, where the hearth and the plastered floor still bear traces of their decoration; the floor was painted and polished to give the effect of variegated paving stones. The walls, too, were decorated with painted frescoes ultimately derived from Minoan models, though the Mycenaean fresco style is distinct from the Cretan in many respects. None of the palaces is standing above foundation level today, however, and their original appearance must be reconstructed from stone footings and fragments recovered through excavation. These suggest that, at Pylos at least, the upper story was made of mud-bricks.

As befitted their role as the administrative centers of small kingdoms, Mycenaean palaces contained storerooms for agricultural produce and luxury manufactures. The rulers no doubt

drew wealth from the surrounding countryside in the form of tribute and taxation. The Linear B tablets from Pylos contain references to bronze weapons and vessels, female textile workers, a perfume industry, and the allocation of bronze to metalworkers (Figure 9.10). These clues suggest that the palaces were centers of craft production under the direct control of the ruler, rather as the Mari tablets indicate in the Near East (see Chapter 7). There are also references in the Pylos tablets to palace furnishings: chairs of ebony and greenwood, for example, decorated with ivory or inlaid with gold and electrum figures of men, animals, and vegetation; or a footstool inlaid with blue glass and fitted with gold struts.

The Mycenaeans were not only builders but also engineers. This appears most clearly in the Argolid and Boeotia. Around Mycenae, a whole network of paved roads has been traced, complete with bridges and culverts where there were streams to cross. The roads may have been built to carry horse-drawn chariots, which would otherwise have found the broken terrain difficult to traverse. A more substantial undertaking was the dam built upstream of Tiryns in the thirteenth century B.C. This diverted the stream via an artificial canal, approximately 0.5 kilometers (a third of a mile) long, into a new course well south of the citadel and may have been a response to extensive flooding shortly before. The most extensive engineering works undertaken by the Mycenaeans were the dams and canals built to drain Lake Copais, northwest of Thebes. These are evidence for powerful central direction by a ruler or dynasty based probably at Orchomenos, as suggested by the discovery of Linear B tablets and the impressive chambered *tholos* tombs (see next section).

The Political Geography of the Mycenaean Kingdoms

The tombs, along with the palaces, are crucial evidence for the political geography of Mycenaean

Greece. We have already described the famous Shaft Graves of Mycenae with their fabulous wealth of grave offerings. These date from the sixteenth century B.C. Most, though not all, later Mycenaean princely burials were laid in impressive stone burial chambers, circular in shape and covered by a corbeled vault, commonly known as *tholos* tombs. The most sophisticated is the so-called Treasury of Atreus at Mycenae, with smoothed stone facing and decorative slabs carved with spirals in relief. Clusters of such tombs at various locations in southern Greece probably represent local centers of power. Their presence close to a citadel, palace, or other major site may indicate the center of a small kingdom. If such evidence can be trusted, Mycenaean Greece was divided into a dozen or more separate states. These were not city-states on the Near Eastern model but princedoms ruled from palaces, without any large population centers. Many upland areas may have remained outside the system altogether. There is certainly nothing to suggest that the whole land formed a single unified kingdom, even if the Mycenaeans are to be equated with references in Hittite texts, which speak of a "King" or "Great King" of Ahhiyawa (see Chapter 7).

Linear B tablets provide important information about the political geography of Mycenaean Greece. Those that have survived, including substantial archives from Pylos and Knossos, relate almost exclusively to administrative matters. Writing was clearly an important tool for the government of Mycenaean kingdoms. The Pylos tablets provide valuable evidence for the internal organization of this Mycenaean state. They show that it was divided into two provinces: the Nearer province, consisting of the coastal area around Pylos itself, and a Further province, stretching inland into the mountains. Each province in turn was divided into sixteen districts administered by a governor. At the apex of the administration was the king, or *wanax,* with his army chief and court companions.

Mycenaean Crafts

As with the Minoans, pottery is one of the most widespread Mycenaean products and is the basis for the internal chronology.[3] Mycenaean pottery is a high-quality product, with thin-walled, wheel-made vessels and attractive, often elaborate shapes. Painted decoration, too, is of a high standard, ultimately derived from Minoan models but recognizably different. Floral and marine subjects are popular, slightly stiffer in composition than their Cretan counterparts. Special mention must be made of the "pictorial" vessels, which appeared in Late Helladic III times. These show painted scenes such as chariot processions, bulls, or in one case a line of marching foot soldiers. It must be remembered that painted pottery, though widespread, is always in the minority on Mycenaean sites. Most of the everyday pottery was undecorated, though still of high quality.

Mycenaean craftspeople displayed a wide range of skills, many of them for use by the palace elites. As we have seen, the palaces themselves were the setting for some of this craft activity. Here we may mention carved gemstones, gold jewelry, carved ivory, and metal vessels like the famous gold Vapheio cups. Some of the materials must have been imported: Tin for the bronze, for example, probably came from the Near East, and amber, used in jewelry, traveled to Mycenae and other sites across a network of trade routes from Baltic sources. Lapis lazuli was another ex-

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[3] Mycenaean pottery classifications are complex. In pottery terms the Mycenaean civilization comes under the Late Helladic Period (LH), to distinguish it from the Late Minoan (LM) of Crete and the Late Cycladic (LC) of the islands. Late Helladic is subdivided into three major units (LH I, II, and III), and these again into smaller divisions (LH IIA, IIB; LH IIIA1, IIIA2, IIIB1, IIIB2; IIIC; with regional and site-specific subdivisions) from the evidence of pottery shapes and decorations. There is a large literature on the subject, and these pottery styles are generally taken to represent successive time periods of around fifty years, though some (e.g., LH IIIB2) are not pre-

otic import, brought from sources as far away as Afghanistan.

The Linear B tablets refer to craftspeople in bronze and to storerooms with chariots. It is clear from this and the evidence for fortification that the Mycenaean world was a warlike environment, although not necessarily more so than neighboring regions. The supposed contrast between a warlike Mycenaean Greece and a peaceful Minoan Crete is in the process of reassessment, though it remains true that armor and weaponry are more prominent in the Mycenaean world, both in actual finds and in artistic depictions. A striking example is the bronze body armor from the rich tomb at Dendra, though this was probably exceptional and cumbersome to wear as well. A boar's tusk helmet was also found in this tomb; examples are known from other sites, and they are sometimes depicted in art. Shields, spears, and swords, however, were the commonest weapons. We suspect that the chariot, which appeared in art and on the tablets, can have been of little use as a war machine in the rugged Greek terrain, though the palaces evidently maintained large fleets of these vehicles. They were probably used as mobile archery platforms, as in the Near East. This is very different from the practice suggested by Homer's *Iliad*, where chariots ferry aristocratic warriors to and from the battlefield, but by Homer's day chariots had not been used in Greek warfare for several centuries. That the *Iliad* cannot be used as a reliable guide to Mycenaean military practices is underlined by other features (e.g., the use of iron swords and cremation) that clearly refer to a later age.

9.2 DISCOVERIES *The Uluburun Shipwreck*

Few archaeological finds rival the extraordinary cargo found aboard a Bronze Age ship wrecked

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sent in all areas.

off the rugged Uluburun cliffs in southern Turkey. Shipwrecks like this offer unique opportunities to study ancient trade, for each ship on the seabed is a sealed capsule, its holds a mirror of trading conditions at the time. George Bass and Cemal Pulak's excavation of the Uluburun ship has yielded a mine of information on the commercial world of the eastern Mediterranean in the fourteenth century B.C. The heavily laden ship was sailing westward from the eastern Mediterranean when it was shattered on the jagged rocks of Uluburun in about 1306 B.C. (a date from tree rings in firewood found in the wreck). It sank on a slope, between 44 and 52 meters (144 to 170 feet) below the surface. Bass and Pulak plotted the exact position of every timber and every item of the ship's equipment and cargo as they lifted artifacts from the seabed. They have recovered a unique portrait of eastern Mediterranean trade more than 3,000 years ago.

The Uluburun ship was laden with over 350 copper ingots, each weighing about 27 kilograms (60 pounds), a load of 10 tons, enough to equip a small army with armor and weapons (Figure 9.11). The tin may have come from southern Turkey. One hundred and fifty two-handled Canaanite jars from Palestine or Syria held olives, glass beads, and a ton of resin from the terebinth tree, incense used in religious rituals. The ship's hold contained Baltic amber that probably reached the Mediterranean overland, ebonylike wood from Africa, elephant and hippopotamus ivory, and ostrich eggshells from North Africa or Syria. Egyptian, Levantine, and Mycenaean daggers, swords, spearheads, and woodworking tools lay aboard, and also sets of weights, some fashioned in animal forms. There were costly glass ingots (the earliest known), Mesopotamian cylinder seals, a Mycenaean seal stone, even a gold cup and parts of a tortoiseshell lute. The ship carried an Egyptian scarab inscribed with the name of Nefertiti, along with dozens of fishing weights, fishhooks, and twenty-three stone anchors, vital when anchoring in windy coves. Even the thorny burnet shrub used to pack the cargo was preserved. One unique find were two wooden

diptychs, pairs of writing boards joined together by an ivory hinge, with recessed surfaces for the wax on which commercial transactions or other texts could be recorded.

By using artifact distributions from land sites and a variety of sourcing techniques, Bass and Pulak have reconstructed the ship's final journey. They believe the vessel started its voyage on the Levant coast, sailed north up the coast, crossed to Cyprus, then coasted along the southern Turkish shore. It called at ports large and small on its way west, along a well-traveled route that took advantage of changing seasonal winds, to Crete, some Aegean islands, and perhaps to the Greek mainland. Captain and crew may have traversed this route many times, but on this occasion their luck ran out and they lost their ship, the cargo, and perhaps their lives on the Uluburxun rocks. From the archaeological perspective, the Uluburun shipwreck is a godsend, for it allows researchers to fill in many details of an elaborate maritime network that linked the eastern Mediterranean with Egypt, the Aegean, and Greece more than 3,300 years ago. This may not have been purely a trade mission. There are hints that the ship was carrying Aegean ambassadors, and the valuable elements in the cargo, including the copper ingots, may have been a diplomatic gift from the Egyptian pharaoh, destined perhaps for one of the Aegean palaces.

The Mycenaeans Abroad

The Aegean world had had trade relations with the Near East from at least the third millennium B.C., but in the Late Bronze Age these take on a much greater (or more visible) importance. The evidence consists mainly of Mycenaean and, to a lesser extent, Minoan pottery, which is found in large quantities in Egypt, along the Levantine coast, and in Cyprus. A large proportion of the vessels are small containers, probably used for the transport of perfumed oils; in this case it was obviously the contents rather than the pottery itself that was important. Analysis of the pottery fab-

ric by the technique known as optical emission spectroscopy has shown that most of it comes from the Argolid, which was evidently the key region of Greece that participated in these exchanges.

The large quantity of Mycenaean pottery at east Mediterranean sites could be taken to imply that Mycenaean traders were regular visitors at Syrian and Cypriot ports. While this may have been the case, it is clear that much Mycenaean pottery was carried in non-Mycenaean vessels. The evidence comes from excavations by George Bass and others at Bronze Age shipwrecks off the southern coast of Turkey (Box 9.2). These were not Mycenaean ships but Syrian or Canaanite vessels that carried Mycenaean pottery among a range of other wares. In both cases, the principal commodity appears to have been copper ingots, mainly of "ox-hide" shape (rectangular, with concave sides and projecting corners). The copper had been mined on Cyprus and was perhaps being shipped westward, along with some tin, for trade to the Mycenaean world. These sites divert emphasis from the Mycenaean decorated pottery, which is so prominent in the archaeological record, to the much more valuable trade in copper ingots, which would have been melted down and cast into finished goods upon arrival at their destination. The Uluburun wreck also contained finished metal goods: glass beads; unworked ivory, gold, and silver ornaments; and ostrich eggshells from countries as far afield as Syria and Egypt.

The East Mediterranean was not the only area of Mycenaean overseas interest, however, and it is possible that in the central Mediterranean Mycenaean sailors and ships were the principal carriers. Mycenaean pottery has been found around the coasts of Sicily, southern Italy, and Sardinia. Some authorities have gone so far as to argue that the site of Scoglio del Tonno, overlooking the excellent natural harbor of Taranto Bay, may have been a Mycenaean trading station, an

argument based on the quantities of Mycenaean and native Italian material it has yielded. Mycenaean pottery reached the island of Malta and even the coast of southern Spain. What the Mycenaeans were getting in return remains an enigma, but on Sardinia the main object was no doubt Sardinian copper. Copper ingots of the typical ox-hide form have also been found on Sardinia, and the Mycenaeans could actually have been involved in working the mines on the island. Surprisingly, analyses of the metal suggest that Sardinian ox-hide ingots are of Cypriot (rather than Sardinian) copper, though they may all be in reality of recycled metal.

Whatever the scale of Mycenaean involvement far afield, it was in the Aegean region that it had its greatest impact. As we have seen, at some point during the fifteenth century Minoan Crete was absorbed into the Mycenaean orbit and Greek-speaking leaders became the new rulers of Knossos. Mycenaean influence became particularly strong in the islands of the Dodecanese, including Rhodes. Whether this ascendancy was achieved by peaceful or violent means is uncertain, but the Linear B tablets from Pylos do mention substantial numbers of female captives and their children (but relatively few men) from places in the eastern Aegean like Chios, Lemnos, and Knidos. They were employed by the palace for spinning and food processing and received rations in return. Two interpretations are possible: Either they were purchased in slave markets of the eastern Aegean, or they were captives taken directly by the Mycenaeans themselves.

The picture of Mycenaean seaborne warriors raiding settlements on the coasts and islands of the eastern Aegean may have provided the historical background for the Homeric story of the Trojan War. References in Hittite royal records to a king of Ahhiyawa who operated in a hostile manner in Aegean Turkey may also relate to “Achaean” (Mycenaean) military activity on the Turkish mainland. The coastal area around Miletus and Halicarnassus may even have become a

Mycenaean enclave; it faces west toward the heavily Mycenaean-influenced Dodecanese. It is, of course, very difficult to be certain that we are dealing here with ethnic Mycenaeans rather than with the local adoption of Mycenaean fashions in pottery and burial.

AFTER THE PALACES: POSTPALATIAL GREECE (1200–1050 B.C.)

The thirteenth century B.C. was a time of increased insecurity on the Greek mainland. New or enlarged fortifications were built at Mycenae, Tiryns, Athens, and several other sites. Work even began on a wall across the Isthmus of Corinth to protect the Peloponnese from landward attack, a project repeated in classical times when Greece was threatened by Persian invaders. Shortly afterward, around the end of the thirteenth century B.C., the palaces themselves were destroyed. Pylos went up in a huge conflagration, which proved to be of great good fortune to archaeologists since it baked hard and preserved the clay Linear B tablets in the palace archives.

The causes of this destruction, at Pylos and elsewhere, are unclear. There is no evidence to suggest that the countryside was overrun by foreign raiders or invaders. Drought, crop failure, and internecine warfare among the various kingdoms may all have played their part. Whatever the causes, over a period of fifty years or so all the major palaces were abandoned, an event that ushers in the so-called Postpalatial period (c. 1200–1050 B.C.). This was generally a time of reduced prosperity, though the town of Tiryns, for example, grew to be even larger than before (maybe providing refuge for people from the surrounding countryside). Overseas contacts were maintained, but Crete and the Dodecanese, rather than the mainland, seem to have been the leading centers of trade in the Postpalatial period. By around 1000 B.C., however, even this economic activity had slowed. The demand for craftmanship declined still further, and settlements became small and dispersed. In areas of southern Greece such as Messenia and Laconia there is evidence

of severe depopulation.

It was hardly an optimistic moment, but this was the economic and political matrix from which the world of classical Greece was to develop during succeeding centuries. By the eighth century B.C., city life and foreign trade had revived and the first Greek epics were being written in the newly adopted alphabetic script. These legends and epics contain echoes of the Mycenaean Palace age, most famously in the *Iliad* and the *Odyssey,* attributed to Homer. There is little doubt that such texts incorporate historical elements—the Trojan War may have been a real historical event—but their picture of swashbuckling heroes engaged in single combat is a far cry from the painstaking palace bureaucracies revealed by the Linear B tablets (see Figure 9.12 on page 270).

SUMMARY

The first Aegean civilizations, those of Minoans and Mycenaeans, flourished during the second millennium B.C. We have seen how they related to each other and to the rest of the Mediterranean world, with Mycenaeans replacing Minoans as the dominant regional power during the fifteenth century B.C. Their remains consist of palaces and citadels, frescoes and traded goods, and they are very different in scale from the cities and states of contemporary Egypt or Mesopotamia. A major theme throughout this chapter is contrast and comparison among Crete, the Greek mainland, and the Aegean islands. Each had its own individual character yet drew on a common pool of cultural influences and borrowings. Another theme is the tantalizing glimpses provided by later Greek legends, which seem to tell of Bronze Age historical events. The discovery that Linear B script is a version of Greek shows that the Mycenaeans were the direct ancestors of the Greeks of the classical period, whose story we follow in Chapter 10.

The “Lily prince” fresco from Knossos, Crete.

Figure 9.1 Map of the Bronze Age Aegean, showing sites on Crete, the Cyclades, and the Aegean coast of Turkey.

Figure 9.2 Cycladic marble figurine of the classic "folded arm" type. These figurines have sometimes been found in graves, though many have been looted from unknown locations for sale on the international antiquities market in recent decades. The high prices that they command have fueled the illegal traffic, and the looting has destroyed much of the evidence about their original purpose and significance. Traces of paint preserved on some figurines suggest that the surfaces may originally have been brightly colored. Mid-third millennium B.C. (*National Archaeological Museum, Athens.*)

Figure 9.3 Reconstruction of the palace of Knossos, Crete.

Figure 9.4 Bull-leaping (Toreador) fresco from the palace at Knossos, Crete, showing a man vaulting over the back of a charging bull and a woman standing behind with outstretched arms, waiting to catch him. Sir Arthur Evans assumed that white figures were female and reddish-brown figures were male but this attribution is now disputed, and the color conventions of Minoan art are not always clear. The figure on the left, grasping the horns of the bull, is wrongly reconstructed and probably comes from another fresco. (*Minoan, c. 1450–1400 B.C.E. Archaeological Museum, Heraklion, Crete, Greece. Copyright Scala/Art Resource, NY.*)

Figure 9.5 Faience figurine of the Serpent Goddess of Knossos.

Figure 9.6 Houses of the Late Bronze Age town of Akrotiri on Santorini, preserved through being buried by the ash and pumice from the volcanic eruption.

Figure 9.7 Gold mask of Agamemnon from the Shaft Graves at Mycenae. "I have gazed on the face of Agamemnon," telegraphed Heinrich Schliemann to the king of Greece in 1876 when he

opened the fifth of the Shaft Graves at Mycenae. According to Homer, Mycenae was the seat of the Greek leader Agamemnon, who led the expedition against Troy. Just within the Cyclopean walls, Schliemann came upon five rectangular, rock-cut pits, which contained the remains of nineteen individuals accompanied by lavish offerings of gold. A sixth was discovered by his assistant the following year. Some of the bodies had gold face-masks over the skulls. Schliemann, ever the romanticist, identified the finest of these as the "Mask of Agamemnon." We know now that this is a chronological impossibility. The Agamemnon who took part in the Trojan War must have reigned in the thirteenth century B.C. The leaders buried in the Shaft Graves lived some three centuries before, at the beginning of Mycenae's greatness. They provide graphic evidence for the rise of elite rulers in sixteenth-century Greece, an event that marks the opening of the Mycenaean period. (*National Archaeology Museum, Athens, Greece, Copyright Giraudon/Art Resource, NY.*)

Figure 9.8 The Lion Gate at Mycenae, principal entrance into the citadel. The gate takes its name from the sculptural group above the entrance, which shows a pair of lions on either side of a pillar. What originally stood on top of the pillar is unknown, but the lions are clearly merely heraldic supporters in the overall scheme. Note the massive "Cyclopean" blocks used in both the gate and the wall to its left.

Figure 9.9a Tiryns: plan of citadel showing its development during the fourteenth and thirteenth centuries B.C.

Figure 9.9b Tiryns: photo of archery casemates.

Figure 9.10 Clay tablets with Linear B script from the palace of Knossos (Crete). The smaller tablet records numbers of sheep, the larger one concerns the offering of oil to various deities.

Figure 9.11 Excavation on the Bronze Age shipwreck at Uluburun, near Kas, southern Turkey. Note copper ingots in the foreground.

Figure 9.12 Fortifications of Troy VI. The *Iliad* tells of a war fought by the Achaeans (Greeks), led by Agamemnon, high king of Mycenae, against the city of Troy, near the Dardanelles at the northwest corner of Turkey. In the 1860s the site of Troy was identified with the mound of Hissarlik by British archaeologist and local resident Frank Calvert. Heinrich Schliemann's excavations in the 1870s uncovered a series of Bronze Age settlements, stretching back into the third-millennium B.C. Among them was a fortified citadel of Late Bronze Age date (Troy VI), contemporary with the Mycenaean citadels of Greece. Schliemann himself erroneously equated Homer's Troy with Troy II, a much earlier third-millennium fortress; his assistant Dörpfeld corrected the chronology some years later. Troy VI suffered severe destruction around 1250 B.C., for which both earthquake and human assault are possible explanations. It is tempting to link this destruction with the legend of the Trojan War. The Mycenaeans may well have been raiding this coast in the thirteenth century B.C., and local strongpoints such as Troy would have been natural targets in such a conflict. The Greek legends of the Trojan War contain many elements borrowed from later periods, however, including the use of iron and the emphasis on the burial rite of cremation, as in the description of Patroclus's funeral. Inhumation was the standard rite in the Mycenaean period. Recent excavations by German archaeologist Manfred Korfmann have shown that the Troy excavated by Schliemann was in fact only the citadel of a larger Late Bronze Age city.